# Summary of Comments Received on 2016v2 Emissions

January 31, 2022

# Background

- A collaborative approach was used to develop 2016 platform inventories starting in the fall of 2017 and continued through the 2016v1 release in fall 2019
  - A few updates (CMV, future year EGUs) were made in January 2020
- Comments were received as part of the Revised CSAPR Update that we should be using more recent inventory data, including data from 2017 NEI
- As time passed, by spring of 2021 it was necessary to make updates to the inventories to perform credible / defensible modeling in CY2021
- The 2016v2 inventories were developed by EPA in spring-summer of 2021 and use more 2017 NEI data, MOVES3, and other improvements based on newer data and methods (e.g., AEO2021 for projections)
- MJOs and states have requested that EPA provide its emission inventories that would be used for rulemaking purposes for comment prior to modeling with them
- Providing the data prior to modeling was not possible this time due to a settlement deadline, but 2016v2 platform emissions data were released on the air emissions modeling website around September 21, 2021
  - https://www.epa.gov/air-emissions-modeling/2016v2-platform
- Comments were informally requested by December 17, 2021

# Commenters that submitted by 1/31/2022

- Arkansas DEQ
- Colorado APCD
- Connecticut DEEP
- Delaware DNREC
- Florida DEP
- Georgia DNR
- Illinois EPA
- Idaho DEQ
- Iowa DNR
- Kansas DHE
- New Jersey DNP
- Massachusetts DEP
- Michigan DNR
- *Midwest Ozone Group*
- Minnesota PCA
- Missouri DNR
- North Carolina DEQ
- North Dakota DEQ
- Ohio EPA
- Tennessee DEC
- Texas CEQ
- Virginia DEQ
- Wisconsin DEQ
- Western Regional Air Partnership
- *Still planning to submit*: Oklahoma DEQ

# Comments on airports

- GA: Found some duplicated rows in inventory provided by GA
- IL, MN, OH: Provided some projection factors
- TCEQ: 2023 projections of DFW look inconsistent with FAA Terminal Area Forecast (DFW larger than ATL)
- **Overall strategy:**
  - Remove duplicated rows from GA inventory
  - Review provided projection factors
  - Analyze projected airport emissions as compared with TAF
  - Update to 2020 TAF released in July 2021 (current projections use 2019 TAF)

# Comments on CMV

- DE, NJ, VA: County apportionment for 2016v1 is different than 2017 NEI
- WI: Found inconsistency between factors applied to files for 4km and coarse grids for 2016v1 (LADCO grids)
- **Overall strategy:**
  - Review why the 2016v1 and 2017 NEI have different county/state apportionment.
  - Check with LADCO to see if there is an issue with 4km projected inventories

# Comments on nonpt

- CO: Remove specific SCCs from nonpt because they are in point
- EPA: Use more data from 2017 NEI (e.g., ICI fuel combustion) for this sector
  - 2017 NEI data were only used for certain SCCs based on the EQUATES method
- ID: Should use 2017 NEI as-is for nonpt (represents 2016)
- MN, OH: Provided some projection factors
- VA: ICI fuel combustion should be pulled from 2017 instead of projected from 2014 to 2016
- **Overall strategy**:
  - Address CO comment
  - Confirm implementation for ID
  - Review provided projection factors
  - Review impacts of using more 2017 NEI data

# Comments on np_oilgas

- CO: Green completion regulations in the state should be reflected in the inventory (suggested retaining 2016v1 emissions as an alternative)
- IL: Provided some projection factors
- TCEQ: The oil and gas tool may be underestimating VOC emissions
- WRAP: Use WRAP-provided exploration emissions in future years (also impacts pt_oilgas)
- **Overall strategy:**
  - Research impacts of CO green completions
  - Review IL-provided factors
  - Research TCEQ comments on potentially underestimated VOC
  - Implement WRAP-provided exploration emissions in future years

# Comments on onroad

- EPA: Need to account for LD GHG rule finalized in 2022 in 2016v3
- GA: Use lower starts per day as submitted for 2016v1/2017 NEI (reduces VOC emissions)
- NC: Account for changes in I/M programs effective in 2023 (there are fewer counties)
- OH: Review age distributions for light commercial trucks and combination long haul trucks
- TN: Account for changes in I/M programs (fewer counties have them after 2022)
- VA: Analyzed data for all CONUS states. Comments on inconsistencies in VMT growth factors, extended idle activity data, age distributions, fuel month treatment and temporal profiles
- **Overall strategy**:
  - Review Georgia suggested changes.
  - We think NC changes are already implemented.
  - Review age distribution comments submitted by OH.
  - Review TN changes.
  - Review information submitted by VA.

## EPA–HQ–OAR–2021–0208; FRL 8469–01–OAR]

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| Percent Change Between MOVES3.0 and New LD GHG rule | | | | |
|---|---|---|---|---|
| | LD Only | | All Onroad | |
| | NOx | PM | NOx | PM |
| **2023** | 0.10% | 0.05% | 0.04% | 0.03% |
| **2026** | 0.36% | 0.03% | 0.11% | 0.02% |
| **2032** | 0.24% | -1.39% | 0.05% | -0.91% |

# Comments on ptegu (1)

- AR: Use ERTAC, but if not, reach out to states for inputs; commented on some specific units that should be running or not running in 2026 and 2032
- CT: Provided closure information on MWC closures; identified others that are not closing
- MOG: Commented on early EGU shutdowns (some not included in IPM output), whether co-gens are actually “EGUs”, some units in operation not included while others that are retired were included + unlikely gas conversion, emissions timing issues (year-round vs ozone season)
- NJ: Suggest using ERTAC instead of IPM; HEDDs are important and should be properly reflected in modeling; behind the meter generation is probably not reflected in inventory in total or by day - NJ has some regs for these
- MI: Commented on IPM vs ERTAC including shut downs, future year EGU emission levels – especially for ozone season and calculation of allowances
- MN: Recommended using ERTAC instead of IPM
- ND: Commented on stack parameters for point sources and requested a meeting with OAQPS
- OH: Commented on some shutdowns
- PA: Didn’t submit comments but requested a meeting with CAMD; PA NOx emissions drop by 60K tons from 2016 to 2023; wanted to understand how the low 2023 emissions might impact allowances
- VA: Commented that there are too many retirements and new plants that are not yet permitted - also too much wind capacity in near years; reviewed co-gens in future years
- WI: Recommended ERTAC EGU; some units not running that should be while others running that shouldn’t be

# Comments on ptegu (2)

- **Overall strategy:**
  - CAMD will respond to future year EGU questions
  - Review plans for co-gens – IPM may not project for these to run in future years
  - Investigate ND stack parameters

# Comments on pt_oilgas

- EPA: Suggested using more 2017 NEI data for sources not specifically submitted for 2016
- IL: Provided some projection factors
- ND: Commented on projection factors and stack parameters
- VA: Suggested updated emissions for some sources
- WRAP: Suggested we should use WRAP exploration data for future years
- **Overall strategy:**
  - Review how many sources were pulled from 2014 and develop a plan
  - Review ND stack parameters
  - Review IL and ND suggested projection factors
  - Review Virginia submissions
  - Use WRAP exploration data where appropriate

# Comments on ptnonipm (1)

- AR: Some projection factors are better, but should evaluate projection factors against documented caps; give 2017 NEI data precedence as opposed to 2014
- DE: Use more recent data as the basis for Dupont Experimental Station projections
- EPA: Provided information on some cement industry consent decrees; suggested that sources not submitted specifically for 2016 be pulled from 2017 instead of 2014
- FL: Commented on SO2 projections for some facilities
- IA, KS, NJ: Some solvent VOC sources were dropped from ptnonipm that should have been kept
- IA: Submitted alternative emissions for some facilities
- IL: Provided some projection factors
- MA: Commented on emission levels for several sources

# Comments on ptnonipm (2)

- MOG: Suggested some units should move to ptnonipm from ptegu
- MO: Suggested some growth rates and alternative projection factors
- MN: Provided control information and future emission rates
- NC: Submitted facility closures
- ND: Commented on projection factors and stack parameters
- OH: Submitted some closures.
- WI: Provided some retirements, controls, and growth rates
- TN: Some boilers will retire by 2028 based on permits.
- **Overall Strategy**: Restore dropped VOC sources. Update closures. Review new controls and projections + co-gen approach.

# Comments on solvents

- CO: Remove oil and gas solvent emissions because they are injected below ground
- IA, KS: Perform point source subtraction for solvent point sources
- Mass: Comments on a couple of SCCs
- NJ: Commented on solvents methodology; perform point source subtraction for solvent point sources
- VA: Solvents method of VCPy does not account for local controls
- **Overall strategy:**
  - Perform point source subtraction
  - Review CO suggestion to drop oil and gas solvents
  - Prepare response to NJ and VA comments

# Comments on rail, rwc, nonroad

- ID: Use 2017 rwc as-is for 2016
- MN: Provided some projection factors for nonroad
- IL: Provided some projection factors for rail
- **Overall Strategy:**
  - Review provided projection factors for nonroad and rail
  - Review ID implementation for rwc

# Appendix: Comments organized by submitter

# Brief comment summaries (1)

- Colorado APCD (solvents, nonpt, np_oilgas)
  - Remove solvents SCCs 2420000000 and 2425000000 from nonpt/solvents (dry cleaning, graphic arts) because they are in point
  - Oil and gas solvent emissions are deep injected so no emissions to air actually occur
- Connecticut DEEP (ptegu)
  - Provided closure information on MWC closures; identified others that are not closing
- Delaware DNREC (ptnonipm)
  - Suggested basing projections for a source on more recent historic emissions data
- Florida DEP (ptnonipm)
  - Suggested basing SO2 emissions projections on permits and recent emissions data for several sources
- Georgia DNR (airports, afdust, nonpt, beis, onroad, ptegu, ptnonipm, TSD)
  - Found a few duplicate rows for Hartsfield-Jackson airport emissions
  - Why did afdust change?  Why did emissions with specific NAICS decrease significantly?
  - Clarify version of BELD used and why biogenic emissions changed + a few typos in TSD
  - Described some EGUs that should be included in the future and others to be retired
  - Use the startsperday submitted for 2016v1 (impacts onroad VOC)

# Brief comment summaries (2)

- Idaho DEQ (nonpt, rwc)
  - Use 2017 NEI for 2016 as-is for nonpt and rwc; adjust asphalt paving
- Illinois EPA (airports, nonpt, np_oilgas, ptegu, pt_oilgas, ptnonipm, rail)
  - Provided future emission projection rates for specific SCCs in airports, nonpt, np_oilgas, pt_oilgas, ptnonipm, and rail
  - Provided some specific EGUs not run by IPM but they suggest should be running
- Iowa DNR (ptnonipm)
  - Point sources overlapping solvents were dropped
  - Updated emissions for several plants
- Kansas DHE (solvents, ptnonipm)
  - Found 24 synthetic minor sources missing VOC
- Massachusetts DEP (ptnonipm, solvents)
  - One source renamed; possible missing NOx from some sources
  - 2017 emissions are overstated in 2017 and 2019 (in summary – not used in 2016)
  - Some non-EGU VOC emissions overstated
  - Comments on a couple solvents SCCs

# Brief comment summaries (3)

- Michigan DNR (ptnonipm, ptegu)
  - Suggested non-EGU control efficiencies
  - Some missing emissions at a facility
  - Provided alternative non-EGU projection rates for some SCCs
  - Use of IPM vs ERTAC including shutdowns, future year EGU emission levels - especially for ozone season and calculation of allowances
- Minnesota PCA (airports, nonpt, nonroad, pt_oilgas, ptnonipm, ptegu)
  - Commented on growth rates for 5 SCCs in airports, nonpt, nonroad and pt_oilgas
  - Provided control information and future emission rates for non-EGUs
  - Recommend use of ERTAC EGU emissions instead of IPM emissions
- Midwest Ozone Group (ptegu)
  - Early EGU shutdowns (some not included in IPM output)
  - Comments on whether co-gens are actually “EGUs”
  - Some units in operation not included, while others that are retired were included + unlikely gas conversion
  - Emissions timing issues (year-round vs ozone season)

# Brief comment summaries (4)

- Missouri DNR (ptnonipm)
  - Commented on some non-EGU control factors and suggested alternative projection rates for some non-EGU sources
- New Jersey DNP (ptegu, CMV, ptnonipm, solvents)
  - Suggest using ERTAC instead of IPM
  - HEDDs are important and should be properly reflected in modeling; behind the meter generation is probably not reflected in inventory in total or by day - NJ has some regs for these
  - CMV values in NJ and NY for 2016 do not match the summary description in TSD - should be based on 2017 NEI spatial allocation
  - Review CMV projections since v2 emissions are too high
  - Solvent point sources were dropped and nonpoint solvent emissions changed from 2016v2;
    also had comments on solvents method
- North Carolina DEQ (ptnonipm, onroad)
  - Described changes in I&M programs that impact representative counties
  - Provided a list of 90 facility closures

# Brief comment summaries (5)

- North Dakota (ptegu, ptnonipm, pt_oilgas)
  - Commented on projection factors for pt_oilgas and ptegu
  - Would like to provide updated stack parameters for point sources
- Ohio EPA (airports, nonpt, onroad, ptnonipm)
  - Commented on non-EGU control factors and suggested alternative projection rates for some non-EGU sources
  - Commented on rates for some airport and nonpt emissions
  - Provided shutdown information, including some EGUs
  - Commented on age distributions for combination long haul trucks and light commercial trucks
- Tennessee DEC (onroad, ptnonipm)
  - Onroad inspection and maintenance program changes
  - Permitted coal to natural gas conversion for a large non-EGU

# Brief comment summaries (6)

- Texas CEQ (airports, np_oilgas, TSD)
  - Projected emissions at large airports may not be consistent with TAF projection
  - Nonpoint oil and gas VOC emissions may be underestimated
  - Some CMV reports not properly referenced in TSD
- Virginia DEQ (ptegu, onroad, nonpt, solvents, pt_oilgas, CMV)
  - General comments on process, interaction with AERR, and non-ozone transport uses
  - Comments on future year EGUs including planned retirements, new facilities, and wind
  - Comments on onroad age distributions, fuel month treatment, extended idling, activity projections, and temporal profiles
  - Base ICI fuel combustion on 2017 NEI instead of 2014 projected to 2016
  - Comments on inclusion of local controls for solvents
  - Suggested updated non-EGU emissions for future years including some for pt_oilgas

# Brief comment summaries (7)

- Wisconsin DEQ (ptegu, ptnonipm, CMV)
  - Recommend use of ERTAC EGU
  - Commented on retirement date for some EGUs and some EGUs not running that should be in future years
  - Provided list of non-EGU retirements and controls
  - Suggested growth for paper mill
  - Commented on 2016v1 Great Lakes CMV on fine grids not matching growth rates in regular 2016v1 files
- Western Regional Air Partnership (pt_oilgas, np_oilgas)
  - Why did oil and gas exploration differ from WRAP projected inventory?
  - Follow up on Colorado's comment about not reflecting green completions
- Arkansas (ptnonipm, ptegu)
  - Mentioned that many growth factors are more realistic in 2016v2 but noticed a few outside of the documented cap of 1.25
  - Recommended going backward from 2017 rather than forward from 2014
  - Compare EGUs with ERTAC if possible and if staying with IPM reach out to states for input
  - Use latest AEO when projecting all sectors
  - Review inconsistencies in summary files
  - Some specific comments on EGUs that should be running or not running by 2026 and 2032